

## **H. Regional management**

The range of California scorpionfish is restricted to southern California. A substantial, but unknown, proportion of the stock is in Mexican waters. Initial analysis conducted on individual sub-stocks showed that similar results are obtained for the nearshore stocks. This is corroborated by the similarity in the CPUE and sanitation abundances indices for the nearshore stocks. The sum of the individual sub-stock assessments was similar to the single southern California assessment. However, the individual sub-stock assessments indicated that the exploitation rates are lower in the offshore areas. Unfortunately, there are limited data for the offshore areas. Regional management would require obtaining length-frequency data by CDFG block to allow stock assessments by region. In addition, more information on the site fidelity of California scorpionfish from tagging data would be needed to determine the appropriateness of regional management.

## **I. Research needs**

Differences in growth rates between the sexes may imply that the fisheries have different impacts on the sexes. Sex-specific sampling of the data (e.g. length-frequencies) would help refine the model and identify the different impacts on the sexes. There is only limited information on the stock structure and a large proportion of the stock resides in Mexican waters. Extensive tagging studies would help define the stock structure, evaluate the need for local scale assessments, and determine the impact of the Mexican component of the stock. Catches from the Mexican fisheries would also be beneficial. The growth data are based on limited sampling and an updated aging study may improve the assessment.

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